FROM THE CORE

NCSU Apple Users and CAC Newsletter
October 1989

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Carolina Apple Core

1989 ANNUAL DUES: $15.00

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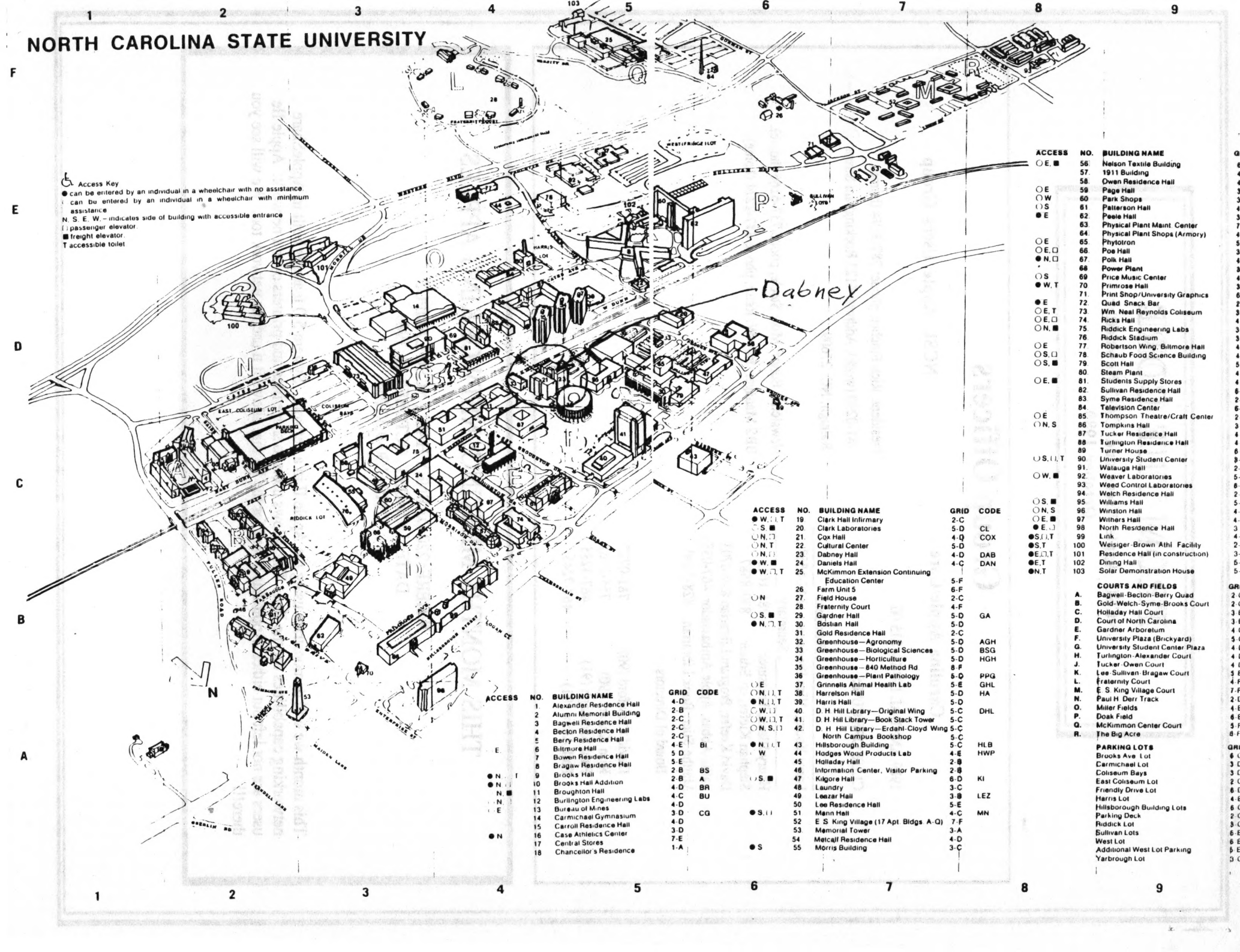
THIS MONTHS MEETING: NETWORKING APPLES

WHERE: 220 DABNEY HALL, NCSU CAMPUS
DATE: MONDAY, OCTOBER 23, 1989
TIME: 7:30-9:30 PM

This month we will demonstrate using the Apple II in a network. System 5.0 features built in AppleShare networking capabilities for the IIgs. This allows users to share files and printers over a network. Apple IIe users are not left out either, Apple has a card for the IIe that allows it ti use the network too. We will see you there!!!

NORTH CAROLINA STATE UNIVERSITY



ACCESS	NO.	BUILDING NAME	GRID	CODE
	1.	Alexander Residence Hall	4-D	
	2	Alumni Memorial Building	2-B	
	3	Bagwell Residence Hall	2-C	
	4	Becton Residence Hall	2-C	
	5	Berry Residence Hall	2-C	
E	6	Biltmore Hall	4-E	BI
	7	Bowen Residence Hall	5 D	
	8	Bragaw Residence Hall	5-E	
● N , T	9	Brooks Hall	2-B	BS
● N ,	10	Brooks Hall Addition	2-B	A
N, ■	11	Broughton Hall	4-D	BR
, N ,	12	Burlington Engineering Labs	4-C	BU
, E	13	Bureau of Mines	4-D	
	14	Carmichael Gymnasium	3-D	CG
	15	Carroll Residence Hall	4-D	
	16	Case Athletics Center	3-D	
● N	17	Central Stores	7-E	
	18	Chancellor's Residence	1-A	

ACCESS	NO.	BUILDING NAME	GRID	CODE
● W , [ ] , T	19	Clark Hall Infirmary	2-C	
, S , ■	20.	Clark Laboratories	5-D	CL
◐ N , [ ]	21.	Cox Hall	4-D	COX
◐ N , T	22.	Cultural Center	5-D	
◐ N , [ ]	23.	Dabney Hall	4-D	DAB
● W , ■	24	Daniels Hall	4-C	DAN
● W , [ ] , T	25.	McKimmon Extension Continuing Education Center	5-F	
	26.	Farm Unit 5	6-F	
◐ N	27.	Field House	2-C	
	28.	Fraternity Court	4-F	
◐ S , ■	29.	Gardner Hall	5-D	GA
● N , [ ] , T	30.	Bostian Hall	5-D	
	31.	Gold Residence Hall	2-C	
	32.	Greenhouse—Agronomy	5-D	AGH
	33	Greenhouse—Biological Sciences	5-D	BSG
	34	Greenhouse—Horticulture	5-D	HGH
	35	Greenhouse—840 Method Rd	8-F	
	36	Greenhouse—Plant Pathology	6-D	PPG
◐ E	37.	Grinnells Animal Health Lab	5-E	GHL
◐ N , [ ] , T	38.	Harrelson Hall	5-D	HA
● N , [ ] , T	39.	Harris Hall	5-D	
◐ W , [ ]	40	D. H. Hill Library—Original Wing	5-C	DHL
◐ W , [ ] , T	41.	D. H. Hill Library—Book Stack Tower	5-C	
◐ N , S , [ ]	42.	D. H. Hill Library—Erdahl-Cloyd Wing North Campus Bookshop	5-C 5-C	
● N , [ ] , T	43	Hillsborough Building	5-C	HLB
, W	44	Hodges Wood Products Lab	4-E	HWP
	45	Holladay Hall	2-B	
	46.	Information Center, Visitor Parking	2-B	
◐ S , ■	47	Kilgore Hall	6-D	KI
	48.	Laundry	3-C	
	49	Leazar Hall	3-B	LEZ
	50	Lee Residence Hall	5-E	
● S , [ ]	51	Mann Hall	4-C	MN
	52	E. S. King Village (17 Apt. Bldgs. A-Q)	7-F	
	53	Memorial Tower	3-A	
	54	Metcalf Residence Hall	4-D	
● S	55	Morris Building	3-C	

ACCESS	NO.	BUILDING NAME	GRID
◐ E , ■	56.	Nelson Textile Building	6
	57.	1911 Building	4
◐ E	58.	Owen Residence Hall	4
◐ W	59	Page Hall	3
◐ S	60	Park Shops	3
● E	61	Patterson Hall	4
	62.	Peele Hall	3
	63.	Physical Plant Maint. Center	7
	64.	Physical Plant Shops (Armory)	4
◐ E	65.	Phytotron	5
◐ E , □	66.	Poe Hall	3
● N , □	67.	Polk Hall	4
	68.	Power Plant	3
◐ S	69.	Price Music Center	4
● W , T	70.	Primrose Hall	3
	71.	Print Shop/University Graphics	6
● E	72.	Quad Snack Bar	2
◐ E , T	73.	Wm. Neal Reynolds Coliseum	3
◐ E , □	74.	Ricks Hall	4
◐ N , ■	75.	Riddick Engineering Labs	3
	76.	Riddick Stadium	3
◐ E	77.	Robertson Wing, Biltmore Hall	4
◐ S , □	78.	Schaub Food Science Building	4
◐ S , ■	79.	Scott Hall	5
	80.	Steam Plant	4
◐ E , ■	81.	Students Supply Stores	4
	82.	Sullivan Residence Hall	6
	83.	Syme Residence Hall	2
	84.	Television Center	6
◐ E	85.	Thompson Theatre/Craft Center	2
◐ N , S	86.	Tompkins Hall	3
	87.	Tucker Residence Hall	4
	88	Turlington Residence Hall	4
	89	Turner House	6
◐ S , [ ] , T	90.	University Student Center	3
	91.	Watauga Hall	2
◐ W , ■	92.	Weaver Laboratories	5
	93.	Weed Control Laboratories	6
	94.	Welch Residence Hall	2
◐ S , ■	95.	Williams Hall	5
◐ N , S	96	Winston Hall	4
◐ E , ■	97	Withers Hall	4
● E , □	98	North Residence Hall	3
● S , [ ] , T	99	Link	4
● S , T	100	Weisiger-Brown Athl. Facility	2
● E , □ , T	101	Residence Hall (in construction)	3
● E , T	102	Dining Hall	6
● N , T	103	Solar Demonstration House	6

COURTS AND FIELDS

A.	Bagwell-Becton-Berry Quad
B.	Gold-Welch-Syme-Brooks Court
C.	Holladay Hall Court
D.	Court of North Carolina
E.	Gardner Arboretum
F.	University Plaza (Brickyard)
G.	University Student Center Plaza
H.	Turlington-Alexander Court
J.	Tucker-Owen Court
K.	Lee-Sullivan-Bragaw Court
L.	Fraternity Court
M.	E. S. King Village Court
N.	Paul H. Derr Track
O.	Miller Fields
P.	Doak Field
Q.	McKimmon Center Court
R.	The Big Acre

PARKING LOTS

Brooks Ave. Lot
Carmichael Lot
Coliseum Bays
East Coliseum Lot
Friendly Drive Lot
Harris Lot
Hillsborough Building Lots
Parking Deck
Riddick Lot
Sullivan Lots
West Lot
Additional West Lot Parking
Yarbrough Lot

Applefest Overview

by Michael Steele

Rick Fincher and myself were fortunate enough to attend the recent Applefest in San Francisco, here is a short summary of transpired as seen from my eyes. Applefest was in the beginning a disappointment, but it got better. At the opening presentation Apple had Nucleus running on the Big screen TV's, this was the first time I'd seen this program, it was amazing. At the opening presentation Jean Gasse who is the second hand man at Apple, head over hardware developement, gave a speech using Roger Wagners new program, Hyper Studio. Although the demo was impressive, Gasse had nothing few new products to present but the question/answer was GREAT! Gasse said that the ROM 3 GS was the "next CPU" that Sculley refered to at the last San Francisco Applefest. Boy what a disappointment, but he emphasized that there were a lot of underlying changes to the hardware that weren't readily apparent.....right (a grad student could've made the mother board changes). The real interesting part of the Q/A was when Bill Mensch bumped in front of this poor kid to responded to a crack Gasse made about Apple not being able to get fast enough 65816's to speed up the GS. WELL boy was Bill ready, he jumped up and told Gasse that he had a bag full of 12Mhz 65816's if Apple was willing to buy them (he held up a bag of chips). Gasse responded with a remark that if Western Design Center produced reliable silicon that Apple would be able to get faster chips, but you could see the steam rising from Gasse, especially on the large screen TV. The shouting match continued and finally ended with Bill storming/being escorted out.(I didn't actually see the gaurds although others attest to their presence) The flare up, although dramatic, saddened me because it shows the friction between Apple and the sole processor manufactor for the GS....not good. Hopefully they will patch things up. I still tend to side with Apple on the chip issue because of an Applied Engineering rep's remark that chips stamped 12Mhz really only ran at 10 or 8Mhz. In addition it is generally accepted that Bill Mensch has always been a bit on the optomistic side. After this opening tirade, things settled down for a usual Applefest.

I personally felt like there were lots of Macs there, but this was probably paranoia on my part. Apple had nothing new to introduce and I was disappointed. On the rumor side though we did get an Apple person to admit that they were developing a HFS driver and were using it inside of Apple. I also got the feeling that they are trying to get the Superdrive to work on the GS (a paraphrase from a Apple person:"it would be the next logical step to add the superdrive to the GS").

Sound: Now **THIS** was new. One of the conferences featured an Apple sound specialist showing a product that's UNDER DEVELOPMENT. AMAZING! Apple actually told us about something before the day of the release! This guy is Good, he is writing additions to the sound tools to help create impressive if not unbelieveable instruments. His 8 minute demo was fantastic using all GS generated sound (he typed it in using a MIDI keyboard). He said the complete sound file for the demonstration was about 64k and everything could be done in the background. His software was fairly simple but I saw an interesting change in the interface. He said that he wrote it himself but it was just like the NeXT. A grey background with 3D buttons that would sink into the screen when you clicked them, the pull down menus were standard, but the screen with the buttons was very impressive.

Third party news: This was one of the good things about the show. Graphicwriter III was running and looked really cool, much better than AWGS AND it only crashed once while we were playing, new features are a filter to input just about any kind of picture you can imagine and a picture compression feature that displays every other line on the screen but prints all of them on the printer. They didn't have a printer but this would allow you to shrink images yielding higher resolutions. The upgrade is $25? (real cheap) and should be ready in November. The next version of ORCA/C should be ready in a couple of weeks. Orca was showing a new product called Design Master that is a resource editor/interface builder. It was REAL nice and will generate the source for whatever window/button combination you create. It will be ready the first quarter of 1990. Andy Nicholas is SELLING the GS version of Shrinkit through L&L Productions. According to author Lance, the upgrade for GBBS, LLuce, will be done sometime in November and will support UUCP . I talked to the AE guys and they said upgrading your Transwarp GS to a faster speed will merely entail replacing the processor and the clock crystal assuming that you have the W roms. Applied Ingenuity is finally coming out with their VCR tape backup for $199. It should store 250 meg on a 6hour tape (don't have the spec sheet with me) and will be ready in a couple of months. Zip is fixing the final revision of their Zip GS accelerator Board (note that this is a board not a chip) and will send it to mass production within a month barring mishaps. The president of Zip gave a really long spiel (he looked like a used car salesman in a $500 suit). He explained that the reason the Zip chip was in limbo was due to a problem with one of thier chip manufactors (yeah, right:-) but now that they have 2 manufactors to alleviate that problem. He also said that they plan to go into the Mac and IBM accelerator markets next year. The 8Mhz versions of the Zip Chip were on display and very impressive and he mentioned the possibility for even faster versions. The Game conference consisted of several game makers, all looked college age, (does this mean that only college kids can write good software :-) displaying their wares and FUTURE products. Several very nice new games are on the way. Someone did a direct conversion of some coin operated game with Conan like man running around slashing up creatures/people. It was very fast, very good graphics, and great sound. Another group demoed a shootem' up, Task Force, being marketed by Britannica, in addition they showed a western shootem' up that was lacking in plot but took advantage of 3200 colors to produce AMAZING graphics. Someone ported Battle Chess so that it would work over a modem with any other Battle Chess. This was chess with a twist, the peices were fully animated in 3d complete with sounds, gruesome battle, and flying heads. The Xenocide people tried to show off their program but it doesn't run yet on the ROM 3 machine, they did say that they were contracting the Nucleus folks to write a Flight simulator for the GS. It was implied that this killer program would be out in 6 months.

BEST OF ALL: Goodness, I saved the best until last. This was the developers conference on Sunday morning. Rather the first official meeting of the Developer's Club(name?). The board of directors consisted of Gary Little, Roger Wagnor, and 3 others

who I recognize but whose names I can't recall(gosh look in Incider December issue for REAL facts!). This was essentially a gathering of all the developers to get Apple off its back side and support the Apple II. The meeting was a GREAT show of comradery and our frustration toward Apple's marketing policies. The board had met with the Apple marketing folks on Saturday and discussed several key issues, ie the dealers unwillingness to sell the GS, the overwhelming amount of developer info for the mac, the lack of the II in Apple's announcement of future products, and the generally sorry marketing approach towards the GS. Apple's response to the board was very good, although they seemed ignorant to some of the complaints, they were open to suggestions on others. As far as developers, go the suggestion was made that there be two developer groups, one for Mac and one for Apple and since the material for the Apple is less volumnous the $600 fee could be lowered to allow the little guy to get developer support. The END was once again the best part though. The director of Apple Marketing USA was sitting at the back of the room(beside Rick Fincher) and stood up to make some closing remarks. He basically said that Apple would look at remarketing the II via mom and pop stores or via mass marketing (ie Sears or Kmart) assuming a feasable business plan could be created that didn't stomp on the dealer's toes. He said that Apple was ignorant of the dealer's unwillingness to sell the GS and would try to alleviate that problem in various ways. Overall he implied that things were going to change for the II in the marketing department. An interesting side note, when the developers were asked, "... if you stopped developing for the GS, would you switch to the Mac?", NO ONE raised their hand. Out of a crowd of possible 50 of the top developers for the GS NO ONE wanted to develop for the mac. I think this news will surprise the Mac crazed people at Apple corporate. Essentially the jist of the meeting was that the developers were going to band together and from what I ascertained Apple is going to work with the board and try to comply with the developers' wishes as much as possible. The group is going to start a mailing and I will publish everything I get.

INTRODUCING THE HP DESKJET PLUS

by Doug Brower

The machine doesn't look like a printer, though you can see where the paper goes in and you can easily guess where it should come out. It doesn't sound like a printer, either. Printers should whine like an angry hornet or pound the plaster from your walls, depending on your choice of a dot matrix or a daisy wheel. This one merely sighs.

The Hewlett-Packard DeskJet Plus is nevertheless a proud dot matrix printer. With a resolution of 300 dots per inch, and a list price of $795 ($550 or so from mail order) it raises serious questions for Apple Computer, Inc., who have preached for so long that their products were expensive because they held the leading technological edge.

JUST THE FACTS, MA'AM.

The DeskJet uses "plain paper drop-on-demand thermal inkjet printing" technology. There is a 1 year warranty. The printer is about 18 inches wide and 15 inches deep. A convenient control panel gives you pushbutton access to draft and near letter-quality modes, landscape or portrait orientations, font size, and so on. The machine is equipped with both parallel and serial connectors. The manual gives explicit instructions for setting up the printer for the Apple][+, //e, //c, and //gs computers (as well as an alphabet soup of HP computers, IBM PCs, and so on).

The Courier font is built into the printer, available in several widths and heights, with boldface and slant (misnamed italic) styles, and a bewildering variety of underlining options.

Additional fonts are available on accessory cartridges that plug into the printer like Nintendo games.

An Epson FX-80 emulation cartridge can also be purchased.

A mature collection of printer codes is provided for those interested in controlling fine details of the DeskJet's operation. While not as complete as the control set found on Diablo or NEC Spinwriter printers, there's plenty of flexibility here, far more than is typically available on dot matrix printers.

NO COMPETITION IN SIGHT.

This sounds pretty good, doesn't it? Just for fun, let's compare the DeskJet to the ImageWriter LQ:

	LQ	DeskJet
List price.....	$1,399	$795
Most recent update.....	May, '89	March, '89
Maximum dot resolution...	216 dpi	300 dpi
GS/OS driver available..	No*	No**
Color printing.....	Yes	No
Warranty.....	90 days	1 year
Width.....	About 6 feet	18 inches
Noise.....	Loud	Quiet

*Uses Imagewriter II emulation
**Uses optional Epson FX-80 emulation

Not much of a contest, is it? Except in the area of color printing, the DeskJet wins hands down. I should add that the DeskJet owner's manual is excellent. Clear, complete, and well-written. Apple's printer manuals used to be like this.

Well, since I've only just this week unpacked the DeskJet, that's about all I can report about this great machine. Suffice to say that so far I'm delighted. Updates to follow.

BEFORE PLUGGING IT IN, IN BOLIVIA

by Sallie Abbas

I was recently facing the unknown: getting two U.S.- made computers to work in South America. I was taking them as a donation for the School for the Deaf in Cochabamba, Bolivia. Having lived in Bolivia before, I knew that one needed a transformer to convert voltage from 220 to 110 volt to run our American "stuff". But how to determine what size (capacity) transformer?

Well, a transformer is rated in watts (volts times amperes) so one just needs to determine the current drawn by the computer, monitor, etc. Often the amps are indicated on the back of the unit. Then it's just a matter of adding these together, from each separate component to be operated, then multiply it by 110, and you've got the wattage rating you'll need for the transformer.

Southeastern Electronics had just the one I needed, but what a heavy son-of-a-gun! I knew I'd be facing an excess baggage charge since I was carrying the computers with me as part of my baggage, so I chose to lug that transformer as hand-carried luggage on the plane. Great! It was like doing weight lifting to raise it to the overhead compartment, but I didn't want to call attention to this so I tried to make it look like a nice light little package, smiling instead of grunting as it went up.

The other concern I had was whether there would be a problem with the monitors scanning properly, with the 50 cycle current found in Latin America versus our 60 cycle. Some technical "types" to whom I spoke seemed to think there might be a garbled picture, others said "no problem" with most monitors. Well, was there, or wasn't there?? I called one store in Raleigh to inquire, and the salesman said "Good news! They had a monitor with a switch to go from 60 to 50 cycle." That sounded like an answer to resolve the perplexity. "How much?" I asked. "Just $639". Yikes, my project funds wouldn't cover that! I chose instead to cross my fingers and hope the ones who said "no problem" were right.

The computers, well packed in boxes, arrived intact at the Cochabamba airport with me. Of course, Customs officials wanted to know what was in those boxes. "Used computers," we told them (in Spanish, of course). Well, computers are one item on a special list they have posted on the wall, and they weren't about to let them through without levying a heavy tax. We objected, because that was for new computers, not for the used ones we had. To make a long story short, after being visited by many officials, including the Director of Special Educaton for the country and the American Consul, and only after five days of this, were the computers released.

At last! now I would get to try them out to check how everything worked. Oops! the wall receptacle didn't fit the plug on the transformer. Then we obtained an adaptor. I plugged it all together and held my breath. It all worked! What a relief! Thank goodness the "No problem with the monitor" guys were right. Now all I had left to do was to discover what the words in Spanish are for things like monitor, keyboard, return key, files, save, load, etc., etc.

As luck would have it, I found a book in Spanish for WordPerfect and one for Lotus. These were great help for many computer-related terms. I was off and running, helping three teachers at the School for the Deaf to learn these programs, as well as DOS. These teachers in turn will work with the upper level students.

The Nucleas Demo

by

Roy W. Reter

The new and exciting demo program for the Apple IIgs is the new program from France called Nucleas. This program shows you exactly what a GS is capable of doing. You are first impressed that it loads in only nine seconds, yes you read that correctly. After this impressive nine second boot the disk is ejected never to be accessed again. You are then greeted by most impressive digitized sounds and fantastic graphics. The program will run the title screen until a key is depressed, and once one is LOOK OUT!

Once a key has been depressed at the opening screen, you are propelled into a world of sight and sound. Graphics that are almost glitch proof are supported by complex algorithms for there movement. Here you are presented with not only planer graphics but also some that give a 3-D effect. While all this is running, a great musical score is playing (you can change songs by hitting the enter key on your key pad for a total of three available songs.), you can control the number of stars, and the X, Y, and Z axis of the graphic that is currently being displayed. You can also control the volume and zoom in and out from the graphic.

This program is supposed to be the intro to a space shoot-em up type game, and believe me when this one hits the market, I'm going to be one of the first ones there to get this one. If you haven't seen it yet, this one is a must. To run the demo you, need to have the following:

Apple 3.5 drive (Unidisk will not work)
IIgs with atleast 768 to 1 meg of ram
Seatbelt to keep you in your seat because this one will blow you away.

VAPORWARE

Murphy Sewall
From the September 1989 APPLE PULP
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Call the "Bit Bucket" (203) 569-8739
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Better IIgs?

Last month, Apple announced an improved IIgs that is almost exactly as described in last May's column. There are no hints of any other new IIgs models, such as the long rumored IIgs+, in the near future. Perhaps those longing for a faster Apple II will switch to the 10 megahertz IIgs clone shown by Video Technologies at the Apple II Developers' Conference in Kansas in July. Video Technologies claims they will have a design and ROM chips that do not infringe on Apple's copyrights and patents by the time their clone in introduced next year. The Laser-gs has 2 expansion slots, supports AppleTalk, and will retail in the $800 range. - Thanks to Grant Delaney (who was there) for the details

68030 Amiga.

Commodore's Amiga computers have been quietly finding their way into the corporate world as inexpensive graphics workstations. The Amiga will continue to maintain pace with Apple's Macintosh with the introduction of a model built around Motorola's 68030 processor this Fall. - PC Week 31 July

Codename RT-3.

IBM will attempt to become a major player in the technical workstation market on October 17 when a new line of five Micro Channel RT (RISC Technology) computers is announced. The new entry level workstation will have the footprint of a PS/2 Model 30 and offer performance starting in the 18 to 20 MIPS range. The Number crunching power of the $11,000 to $12,000 model calculates out at 7 megaflops. The higher end models will be based on IBM's proprietary ROMP-II RISC chip, but the entry level system may use Intel's i860. Although the systems will use the AIX 3.0 operating system, a decision has not been reached on the user interface. In the past, IBM has said it would provide Motif and Next Step with AIX. - InfoWorld 24 July and 7 August

Macintosh Workstation.

Volume shipment of DayStar Digital's 50 MHz 68030 (see last May's column) Macintosh II accelerator is scheduled for October. The 50/30 Accelerator is available for the original Mac II as well as the IIx series. Benchmark test using a prototype of the 50/30 board showed overall performance better than twice that of a stock IIx, and in math intensive applications, the board is more than three times as quick as a standard IIx. The 50/30 Accelerator will retail for $5,995. - MacWeek 25 July

486 Delay.

Last month's column must have jinxed Intel. No sooner did it appear than vendors were told to expect "later delivery." David Kirkey, vice president of sales and marketing at ALR, said Intel had originally promised initial shipments of the chip in September but is now saying October or November. A spokeswoman for Intel maintained that the chip is "totally on schedule" for fourth quarter volume shipments. - InfoWorld 14 August

New Compaq's.

Compaq's first Extended Industry Standard Architecture (EISA) computer will be an i486 model to be announced in October. The Compaq 486 also will have a hard disk with cache memory which yields an average access speed of roughly 10 milliseconds. By year's end, Compaq plans to announce a dual i486 model that can be expanded into a departmental computer with 32 Mbytes of RAM and 10 gigabytes of erasable optical storage. The fully configured version of Compaq's twin processor machine is expected to cost between $40,000 and $50,000 but deliver performance equivalent to a $200,000 DEC VAX or IBM AS/400. - PC Week 24 July

Who Needs OS/2 (Continued)? IBM and Microsoft have agreed to merge DOS with a version of Windows 3.0 and deliver the combined product sometime next year. Microsoft is expected to deliver one more version of MS-DOS between now and the introduction of the combined DOS with Windows. If Windows permits applications to run in as much as 16 Mbytes of memory (see July's column), users may be able to take forever migrating to OS/2 with PM. - InfoWorld 7 August

Mass Storage Drives.

Storage Dimensions has announced an optical-magneto drive for the PS/2 and Macintosh computers with 1-gigabyte disks. The drive has an average seek time of but 35 milliseconds. Several manufacturers have announced 650 Mbyte read/write optical drives with 95 millisecond average access times for shipment in September: Procom Technology $4,950, Microtech International $4,795, and Supermac Technologies $4,999. - InfoWorld 14 August and Random Access 19 August

Apple's "MCA."

Apple has announced plans to set standards for connecting media devices such as videodisc, videotape, and CD audio players to the Mac. Currently, developers have to write custom drivers for each device. In December, Apple will ship sample device drivers, specifications, and user interface guidelines for the Media Control Architecture (MCA) standard. - PC Week 14 August and MacWeek 15 August

32-bit OS/2.

Microsoft plans to release the first version of OS/2 able to run 32-bit applications early next year. OS/2 version 2.0 will require an 80386 or i486 CPU, but only selected potions of the initial release will take advantage of the faster 32-bit data path. Conversion to a full 32-bit implementation will be done in stages permitting release of portions of the operating system months sooner than otherwise. - PC Week 31 July

Outline Fonts for PM.

In an effort to keep up with the Macintosh, Agfa Compugraphic's Intellifont "outline" font technology will be added to OS/2's Presentation Manager. When OS/2 2.0 is released next year, PM's present two fonts will be replaced by 12 outline typefaces embedded in the system. Microsoft plans to increase the number to 50 fonts within three months of the initial release. - PC Week 7 August

Color LaserWriter.

Motorola is putting the finishing touches on a new digital signal processor called the 96002 intended for a forthcoming Apple color laser printer. - PC Week 14 August

Mac Word Perfect 1.0.3.

Word Perfect has announced an upgrade for their Macintosh product which makes it compatible with MS-DOS Word Perfect 5.0 files and supports their graphics and text formats. The new release will ship in the next couple of months. Upgrades for owners of the current version will be available for $10. - InfoWorld 14 August

SPSS-X on a Desktop.

The Presentation Manager version of SPSS is scheduled to ship later this month with the SPSS-Mac expected in October or November (see last February's column). 4 Mbytes of RAM and a math coprocessor are recommended. - PC Week 31 July and InfoWorld 7 and 14 August

Too Heavy, Too Slow, and Too Expensive.

Rumors about the demise of the LapMac (last month's column) are greatly exaggerated (to paraphrase Mark Twain). It's scheduled for introduction on September 20 along with the 25 MHz Macintosh IIci (described in July's column). The 17 pound SE compatible laptop will retail for $6,500 with 2 Mbytes of RAM and a 40 Mbyte hard disk. - MacWeek 25 July and 1 and 8 August

Claris to Issue PC Software?
Rumor has it that Claris, Apple's software spinoff, has been developing a program for the IBM PC. No information is yet available about the program's purpose (PCWorks?). - PC Week 14 August

Microsoft Office.
In late September, Microsoft will offer a $949 CD-ROM disk for the Macintosh which will include Word, Excel, PowerPoint, Mail, online tutorials, documentation, and a HyperCard interface. The disk will also contain some third party clipart and template libraries, Silicon Beach Software's SuperPaint 1.1, 350 Adobe screen fonts, and numerous other tools and utilities. In addition to the CD player, Microsoft Office will require a hard disk, System 6.02 or higher, HyperCard 1.2.2 and at least 2 Mbytes of RAM (4 Mbytes recommended). - MacWeek 8 August

Word Bug Fix.
Microsoft is planning to issue a maintenance release by early Fall of the latest version of Word (5.0 shipped last April). The update will resolve some idiosyncrasies between 5.0 and previous versions as well as a number of reported problems with the new version. - PC Week 14 August

HyperCard Update.
HyperCard 1.2.2 is not compatible with the LapMac of the 25 MHz Mac IIci. Both will ship with version 1.2.3 which will merely add support for the new Mac models and will not include any major enhancements. - MacWeek 8 August

2 Mbyte Data Card.
Canon has unveiled new optical credit card data storage technology that will permit up to 2 Mbytes of information including pictures, X-rays, and fingerprints to be stored along with alphanumeric data. Unlike today's magnetic card strips, which are affected by magnets, and integrated circuit cards, which can be erased by static electricity, the Write Once, Read Many times (WORM) optical cards are not susceptible to environmental electro-magnetism. Canon plans to ship models of the Optical Card System by next January with volume production slated by 1991. The Reader/Writer drive will sell for between $1,500 and $2,000 and the cards themselves will be about $5.00 each. - PC Week 24 July

3-D Surface Program

The program below plots a curve as a three dimensional surface. It was converted from the Applesoft Basic version that appeared in the book Microcomputer Graphics by Roy E. Meyers (Addison-Wesley 1982). This was one of the first books with programs in Basic that I ever got and it is still a great book on graphics. The program below is in ORCA C for the IIgs but could be converted to APW C or Pascal fairly easily. The Basic version of this program in the book that generates the cosine surface takes 40 minutes to run. It takes about 15 minutes on the IIgs. With an FPE floating point card in the IIgs it takes about 30 seconds to run.

The program pauses and waits for you to press the return key after it draws. One interesting thing that you can do is add a FOR loop around the main program that changes the rho, theta, and phi variables. This changes the viewers perspective of the surface. Phi controls how far above the edge of the surface the eye point is. Theta controls the horizontal angle of view, and rho controls the distance away from the surface that the viewer is.

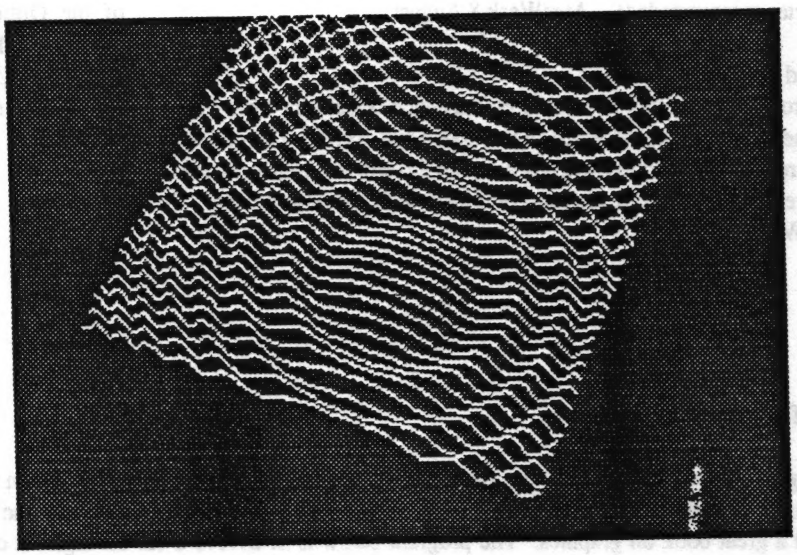
You can also change the function that generates the curve to get all sorts of interesting surfaces. To fully understand how the program works you would have to get the book, but essentially the program creates arrays for each scan line on the screen. The program draws the surface from front to back and draws lines to connect points generated by the function. It checks each line and point for visibility by comparing it to the line or point on the line in front of it. Anything below the line in front is not drawn because it would be hidden if the surface were solid.

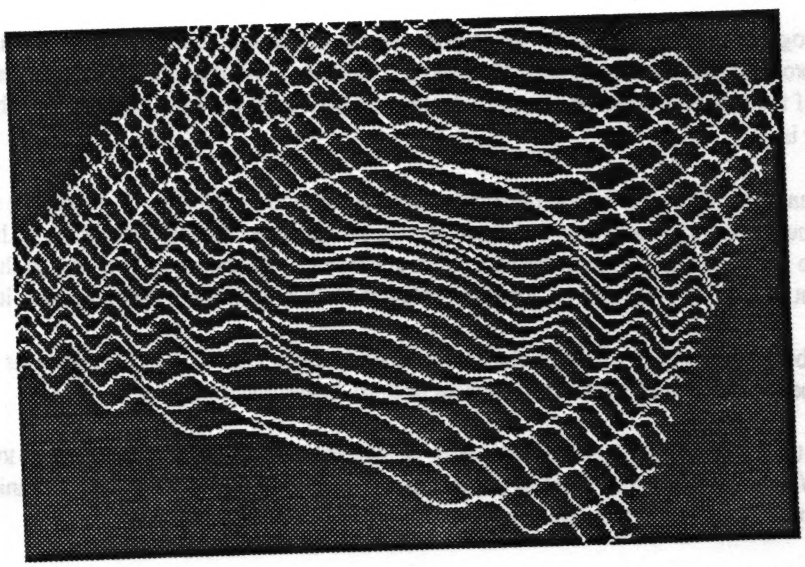
If the book is no longer available (be sure to get the Apple version, a PC version was published later) you can borrow my copy. The book describes all of the math used and has dozens of short, interesting programs.

I used the screen saver CDA that came with Deluxe Paint II to save about 20 screens to disk, each with slightly different views. Then I used PaintWorks (either Gold or Plus) to animate the 20 different pictures. This gives an animation sequence that has you flying over the surface. Some of these views are pictured below.

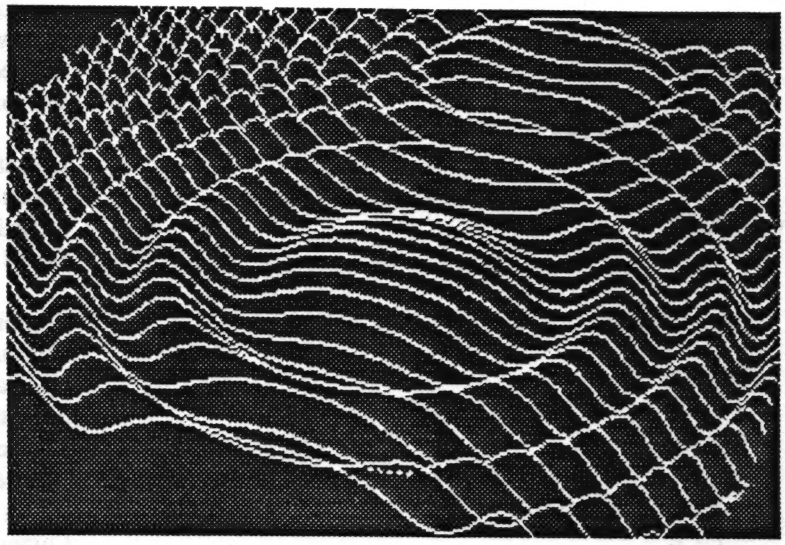
```
/*****************************************************************
*               3-D Surface Program
*
*****************************************************************/
```

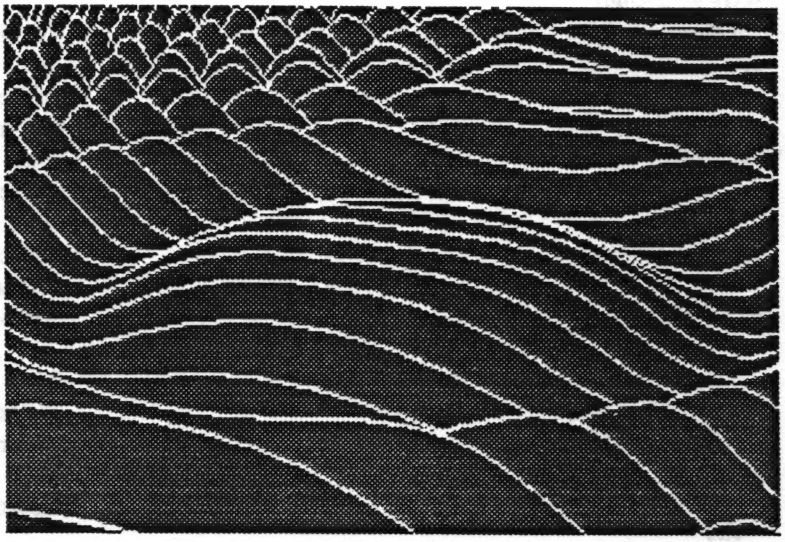
```
#pragma keep    "surface"

#include <quickdraw.h>
#include <orca.h>
#pragma float 1 3       /* This line and the next set up the math coprocessor  */
#define _FPE_ 3         /*  delete them if you don't have and FPE card.        */

#include <math.h>

  float rho, theta, phi, d, cx, cy, s1, s2, c1, c2, x, y, yp;   /* rho, theta, and        */
  float z, dx, sx, sy, sl, xe, ye, ze, temp1, temp2, temp3; /* phi control the view*/
  int   j, i, fg, f, fl, yn[320], yx[320], xp, ox, oy, iyp;

main (void)
  {

  /* Initialize variables */

  startgraph(320);

   ClearScreen(0x7777);

    rho = 400 - (30 * (j * 0.6));
    theta = 0.4;
    phi = 0.6 + (j * 0.04);
    d = 750;
    cx = 160;
    cy = 100;
    ox = 0;
    oy = 0;
    yp = 0.0;

    s1 = sin(theta);
    s2 = sin(phi);
    c1 = cos(theta);
    c2 = cos(phi);

    for(i = 0; i < 319; i++)
      {
      yn[i] = 199;
      yx[i] = 0;
      }


  /* Generate Points */

    for(x = 35; x > -70; x = x - 3)
      {
      fl = 0;

      for(y = -60; y < 45; y++)
        {
        temp1 = x * x;
        temp2 = y * y;
        z = 2 * cos(0.01 * (x * x + y * y));  /* This is the function that is plotted */
                                              /* in 3-D,  play with different vari-    */
                                               /* ations or functions for interesting  */
```





```
                                /* results.                    */
        Plot();
        }

  /* Draw Box Around Screen */
     MoveTo(0,0);
     LineTo(319,0);
     LineTo(319,199);
     LineTo(0,199);
     LineTo(0,0);

     getchar();

     }

  endgraph();

  }

void Plot()
  {

  xe = -x * s1 + y * c1;
  ye = -x * c1 * c2 - y * s1 * c2 + z * s2;
  ze = -x * s2 * c1 - y * s2 * s1 - z * c2 + rho;

  sx = d * (xe / ze) + cx;
  sy = -d * (ye / ze) + cy;

  if (fl == 0)
    {
    fl = 1;
    f = 0;
    }
  else
    {
    dx = ox - sx;

    if (dx == 0)
      dx = 1;

    sl = (oy - sy)/dx;
    yp = oy;

    for (xp =  ox + 1; xp <= sx; xp++)
      { /* begin for */
      fg = 1;
      yp = yp + sl;

      iyp = yp;

      if ((xp < 0) || (xp > 319))
        {
        fg = 0;
        f = 0;
        }
      else
        {
        if (((int) yp > 199) || ((int) yp < 0))
          {
```





```
            fg = 0;
            f = 0;
            }

          if ((int) yp <= yn[xp])
             Plot1();
          else
            if ((int) yp >= yx[xp])
               Plot2();
            else
               f = 0;

          }
        } /* end for */

      } /* end else */

  ox = sx;
  oy = sy;

  } /* end function Plot */


void Plot1()
  {

  yn[xp] = (int)yp;

  if (fg != 0)
    {
    if (f == 0)
      {
      MoveTo(xp,(int) yp);
      f = 1;
      }
    else
      LineTo(xp,(int) yp);
    }

  if (yp >= yx[xp])
     Plot2();
  }


void Plot2()
  {

  yx[xp] =  (int) yp;

  if (fg != 0)
    {
    if (f == 0)
      {
      MoveTo(xp,(int) yp);
      f = 1;
      }
    else
      LineTo(xp,(int) yp);
  }
}
```

VAPORWARE

Murphy Sewall

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Virus Alert! Is it Columbus Day (October 12) yet?

Are you using an MS-DOS computer? According to Tom Patterson, a security specialist at Centel Federal Systems of Reston, Virginia, a self-propagating, network-transferable virus (possibly two viruses) is may erase track 0 of thousands of hard disks when the system clock says it's October 12. The virus reportedly originated with a group of European hackers in August and spreads by adding either 1,168 or 1,280 bytes of code to .COM files (except for COMMAND.COM or any other .COM file with a 'D' as the seventh character). Information about the Columbus Day Virus, also known as DataCrime 89, or the Icelandic Virus, is available from Centel Federal Systems (800) 843-4850 - InfoWorld 11 September and PC Week 11 September

Gigabit Network.

Although BITNET, which links colleges and universities in the US, Canada, and Europe, may continue to plod along at 9,600 baud, the Office of Science and Technology has proposed that Congress authorize a 1-gigabit (100 megabaud) network to become fully operational in 1996. The Office is asking $1.9 billion over five years for the Federal High Performance Computing Program which includes plans for faster supercomputers and better software as well as about $390 million for the National Research and Education Network. Although the network will be developed for research purposes, plans call for it to be open to commercial applications by the turn of the century. - InfoWorld 11 September

The NeXT Step.

Even though its first machine's operating system is barely finished, NeXT is on the verge of introducing a new computer built around the Motorola 68040. The NeXT-40 will be four times faster than the 68030 machine and will permit the instruction cache and data cache to be accessed simultaneously. NeXT is ready to announce now, but Motorola is insisting that the press conference be delayed until the 68040 is actually being shipped. Volume production is slated for the first quarter of 1990. - PC Week 4 and 11 September

Faster Mac II's.

Siclone Sales and Engineering recently introduced a 33 MHz accelerator for the Macintosh IIcx which plugs directly into the 68030 socket. A 50 MHz version will be coming soon. - InfoWorld 11 September

Atari ST Laptop.

This month Atari is expected to announce an Atari-ST compatible laptop computer (code-named "STacey") for $1,500

($2,000 for a model with a 20 Mbyte hard disk). The CPU will be an 8Mhz Motorola 68000. An optional cartridge will permit the STacey to run Macintosh software (if you can get the ROM chips). - Random Access 9 September

The Littlest IBM.

IBM Japan has developed a six pound "notebook" sized AT clone computer built around the 80286 CPU. It will run for two hours on its rechargeable battery and could be introduced in the U.S. by year's end. IBM also plans to offer a battery powered 80386 Laptop PS/2 next year. - InfoWorld 28 August and Random Access 9 September

Unobtainable RT-3s.

Although IBM is scheduled to announce its line of microchannel based RISC machines (see last month's column) this month, they won't be ready to ship until 1990 due to lingering bugs in the NextStep user interface. Rumor has it that the "spokesperson" for the new line will be cartoon character Hagar the Horrible (No, No! You fools, first you pillage, THEN you burn!). - PC Week 28 August [Late breaking (post publication deadline) news: the Oct 16 press conference for the RT has been postponed. There remains a possibility that the announcement will be made before the end of this year, but more likely 1990.] DEC Age of Aquarius. Digital Equipment Corp. will be only a month behind IBM (see above) in announcing a new line of RISC-based machines. The DEC System 9000 series, code-named Aquarius, will be announced in November for shipment next May. - PC Week 4 September

Should You Wait to Buy the Even Better Future Model?

Remember the ambitious "game plan of migration" for IBM PS/2 line described by former entry systems president William Lowe in February 1988 (see the March '88 Vaporware column)? The current "scorecard" for products promised by the end of 1989 is four of 11. Lowe left IBM for Xerox, and current IBM executives "...have to claim ignorance" about Lowe's unfulfilled prophecies. - InfoWorld 28 August

The '286 is Dead, Long Live the 586.

According to Microsoft chairman Bill Gates, Microsoft will no longer be supporting 80286 architecture two years from now. He expects the i586 (see August's column) to begin appearing in commercial machines in early 1991. Intel's senior vice president, David House, told Unix developers last August that the i686 containing 22 million transistors will appear in late 1995 or early '96. By the turn of the century Intel expects to deliver the 100 million transistor i786 running at 250 Mhz while occupying only 1 square inch. - InfoWorld 28 August and 4 September Applescript. Apple will release a Hypertalk-based user scripting language for controlling both applications and system functions "shortly after" the early 1990 release of Macintosh System 7.0. The language will require System 7.0 and will contain statements for executing standard Mac commands as well as commands that are specific to particular applications. Apple is considering supplying an "engine" which will compile and execute scripts upon request by compliant applications. - InfoWorld 21 August

A More Perfect Version.

Word Perfect version 5.1 is expected to ship later this year. The new version adds table support and links to spreadsheets along with pull-down windows and a large number of minor enhancements. However, Word Perfect 2.0 for the Macintosh won't make it until sometime next year. Look for a new drawing, charting, and presentation graphics package called, you guessed it, Draw Perfect at Comdex in November. - InfoWorld 21 August and 11 September and MacWeek 12 September Word 5.0 for Xenix. Microsoft Word 5.0 for the Xenix (a variant of Unix) operating system is in beta test and expected to ship by the end of the year. Xenix versions of Microsoft Works and Excel also will be forthcoming, but schedules have not been set. Excel spreadsheet information will be transparently portable across local area networks between the DOS, OS/2, and Unix versions of the program. - InfoWorld 4 September

Is There a Market for OS/2 Applications?

Informix Software has finished developing an OS/2 Presentation Manager version of its popular Macintosh spreadsheet - Wingz but has shelved plans to offer it until a viable OS/2 market develops. OS/2 is in the process of undergoing an apparently endless series of improvements and enhancements (referred to by one industry pundit as "dribbleware") that is keeping the operating system in "eternal beta." - InfoWorld 28 August

Borland Does Windows.

After proclaiming that they would not develop applications for Microsoft Windows, company officials recently announced that they would begin developing languages and programming tools for Windows as well as MS-DOS and OS/2. Borland also announced plans to ship a version of the C++ programming language. - InfoWorld 11 September

Lotus Suit Slows Intro of VP-Expert for the Mac.

Officials of Paperback Software blame the cost and distraction of defending themselves against Lotus's "look and feel" suit for the delay in releasing their VP-Expert application for the Macintosh. The company now hopes for a first quarter release. When it is completed, VP-Expert/Mac will allow nonprogrammers to create expert systems using "if/then" rules, while more sophisticated users can use a Pascal-like object oriented language. - InfoWorld 28 August

Ashton-Tate Rhymes with Late.

FullWrite 2.0 isn't even ready for beta testing yet, so there's little chance of meeting the projected year-end release. Executives are debating whether to develop an interim improvement for the less than successful dBase Macintosh or await a dBase IV Macintosh which might not get finished by the end of next year. A-T president and chairman, Ed Esber, has indicated that when dBase IV/Mac is released it will be compatible with DOS and OS/2 versions but not with the existing Macintosh version. - InfoWorld 21 August and MacWeek 12 September

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